REMARKS

The present application was filed on October 20, 2003, with claims 1-20. Claims 1-20 remain pending. Claims 1 and 18-20 are the independent claims.

Claims 1-8, 11 and 14-20 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2002/0176357 (hereinafter "Lay").

Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lay in view of U.S. Patent Publication No. 2005/0278503 (hereinafter "McDonnell").

Claims 12 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lay in view of U.S. Patent Publication No. 2002/0075540 (hereinafter "Munter").

With regard to the §102(e) rejection, Applicants respectfully note that MPEP §2131 specifies that a given claim is anticipated "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the "identical invention . . . in as complete detail as is contained in the . . . claim," citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

In formulating the present rejection, the Examiner argues that Lay discloses the limitations of claim 1 wherein a flow control message is generated in the physical layer device and transmitted from the physical layer device to the link layer device. Specifically, the Examiner contends that gigabit interface 104 in FIG. 1 is a physical layer device which generates a flow control message, which is then transmitted to a flow control manager 116 allegedly located in the MAC of ports 102(1)-102(12).

In arguing that gigabit interface 104 is a physical layer device which generates a flow control message, the Examiner relies primarily on paragraph [0031] of Lay:

> Gigabit interface 104, like ports 102(1)-102(12), has a PHY, a Gigabit Media Access Controller (GMAC) and a latency block. The GMAC can be a fully compliant IEEE 802.3z MAC operating at 1 Gbps full-duplex only and can connect to a fully compliant GMII or TBI interface through the PHY. In this example, GMAC 108 provides full-duplex flow control mechanisms and a low cost stacking solution for either twisted pair or TBI mode using in-band signaling for management.

Applicants respectfully submit that the relied-upon portion of Lay in fact discloses that gigabit interface 104, like ports 102(1)-102(12), comprises a physical layer device (PHY) and a link layer device (GMAC). It should be noted that FIG. 1A of Lay shows a plurality of ports 102(1)-102(12), each of which comprises a physical layer device (physical element PHY) and a link layer device (Media Access Controller MAC); see also Lay at [0026] and [0027].

Moreover, because the GMAC can only connect to a fully compliant GMII or TBI interface through the PHY, the GMAC is not a device which provides an interface between a link layer device and a physical transmission medium of a network-based system. Accordingly, the GMAC is not a physical layer device. Thus, even if the disclosure of Lay at [0031] of a GMAC which provides full-duplex flow control mechanisms could be construed as teaching that a GMAC within gigabit interface 104 generates a flow control message, this would nonetheless fail to teach or even suggest the limitation wherein a flow control message is generated in the physical layer device.

Applicants respectfully submit that the new embodiment of Lay relied upon in the present rejection fails to disclose the aforementioned limitations of claim 1 for reasons similar to those presented in Applicants' response filed January 9, 2008, which the Examiner deemed persuasive. See the Office Action dated February 4, 2008, at page 5, first paragraph.

The Examiner further contends that a comparison of paragraph [0028], lines 1-4 ("Flow control is provided by each of the MACs" located in the ports), and paragraph [0039], lines 1-2 ("Switch 100, in one example of the invention, has a Flow Control Manager 116 that manages the flow of packet data") indicates that Flow Control Manager 116 is located in the MAC of a port. Applicants respectfully disagree and instead submit that the MACs within port 102(1)-102(12) and the Flow Control Manager 116 are instead distinct components of switch 100 each of which are involved in flow control.

Additional evidence may be found in FIG. 1A of Lay, which clearly shows Flow Control Manager 116 as being a distinct component rather than located within the MACs of ports 102(1)-102(12). Moreover, even if FIG. 1A of Lay could be characterized as "a functional drawing, not a physical layout," as alleged by the Examiner on page 10 of the present Office Action, Lay at [0051]-[0052] clearly describes the physical interconnections between switch components, and hence describes the physical layout of the switch: "Each of the transmit (TX) and receive (RX) portions of ports 102(1)-102(12) are connected to the PBM Bus, ATM Bus, and TXM Bus for communications

with other components of the switch. . . . [The Flow Control Manager 116 is] also connected to the ATM Bus for communications with other portions of the switch."

Moreover, independent claim 1 recites limitations wherein the flow control message is responsive to a detected condition relating to at least a given one of a plurality of egress queues of the physical layer device and wherein the link layer device is operative to alter a characteristic of a flow of data from the link layer device to the physical layer device responsive to backpressure information in the flow control message.

It should be noted that the present specification at page 8, lines 24-27, with reference to FIG. 1, specifies that "the term 'egress' refers in the illustrative embodiments to the direction of data transfer from the network 108 to user equipment. The egress direction relative to the PLD 104 is thus the direction of data transfer from the PLD interface with the LLD 102 to the PLD interface with the transceiver 106."

The Examiner argues that these limitations are met by Lay at [0028], which the Examiner characterizes as "describing flow control related to [a] backpressure scheme," and [0077], which the Examiner characterizes as describing "setting thresholds - alter a characteristic of a flow."

Applicants respectfully submit that, rather than teaching the claimed techniques wherein a flow control message is responsive to a detected condition relating to an egress queue of a physical layer device and wherein the link layer device is operative to alter a characteristic of a flow of data from the link layer device to the physical layer device responsive to backpressure information in the flow control message, the flow control described by Lay is directed to managing the flow of incoming data packets from the ports of a switch to a memory of the switch. See Lay at [0028] (with emphasis added) ("Flow control is provided by each of the MACs. When flow control is implemented, the flow of incoming data packets is managed or controlled to reduce the chances of system resources being exhausted.")

Furthermore, even if the disclosure of Lay at [0077] directed to "setting thresholds" could be characterized as "alter[ing] a characteristic of a flow," claim 1 specifies that the link layer device is operative to alter a characteristic of a flow of data from the link layer device to the physical layer device. The thresholds taught by Lay, by contrast, specify conditions under which a flow of incoming data packets from the ports of a switch to a memory of the switch should be altered. See, e.g., Lay at [0077] (a low threshold can "indicate when FCM 116 should send a message to the ports

when to slow down the sending of packet data to memory and a high threshold" can "indicate when FCM 116 should send a command to AM 122 to start dropping packets.")

See generally Lay at [0039] ("Switch 100 . . . has a Flow Control Manager 116 that manages the flow of packet data. As each port sends more and more data to the switch, Flow Control Manager 116 can monitor the amount of memory being used by each port 102(1)-102(12) of switch 100 and the switch as a whole.") and Lay at [0074] (Flow Control Manager (FCM) 116 "monitors the ATM Bus to determine how much memory is being used to store data and how much memory is free for storing data. Based on this information, FCM 116 can send commands to each port . . . . requesting that the port slow down the sending of packet data to memory.")

Accordingly, Lay fails to teach, or even suggest, the limitations of claim 1.

Independent claims 18-20 include limitations similar to those discussed above with regard to independent claim 1 and thus believed to be patentable for at least the reasons identified above in reference to claim 1.

Dependent claims 2-17 are believed allowable for at least the reasons identified above with regard to independent claim 1, from which they depend. Moreover, one or more of these claims are believed to define separately patentable subject matter.

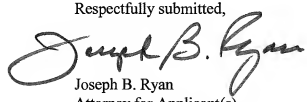
For example, dependent claim 6 includes a limitation wherein the flow control message comprises a logical MPHY value corresponding to the given queue. As described in the specification at, for example, page 1, lines 24-26, an MPHY is one of the multiple channels over which a multiple-port physical layer device may communicate with a link layer device. See also page 11, lines 8-10. As described in the present specification at, for example, page 5, line 22, to page 6, line 5, the inclusion of the logical MPHY value in the flow control message provides a number of advantages.

The Examiner contends that this limitation is met by Lay at [0070], lines 4-7, which the Examiner argues "teaches multiple port logical values." See present Office Action at page 10. Applicants note that the relied-upon portion of Lay discloses that "TXM Memory is allocated on a per port basis so that if there are ten ports there are ten queues within the TXM Memory allocated to each port."

Applicants respectfully submit that the relied-upon portion of Lay fails to teach, or even suggest, the limitation of dependent claim 6 wherein the flow control message comprises a logical MPHY value corresponding to the given queue.

In view of the above, Applicants believe that claims 1-20 are in condition for allowance, and respectfully request the withdrawal of the §102(e) and §103(a) rejections.

Respectfully submitted,



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